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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 745,959	12/21/2000	Mareike Katharine Klee	PHD 99,195	2130

7590 02/21/2003

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EXAMINER

TAKAOKA, DEAN O

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 02/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/745,959	Applicant(s) LOBL ET AL.
	Examiner Dean O Takaoka	Art Unit 2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on December 26, 2002 by amendment (C).
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-8,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2,4-8,13 and 14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on 27 August 2002 is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) Interview Summary (PTO-413) Paper No(s) _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

Claims 1, 2, 4 – 8 and 13 are rejected under 35 U.S.C 102(b) as being anticipated by Ella (U.S. Patent No. 5,910,756) for reasons of record contained in the office action dated September 16, 2002 (paper no. 11).

Claim 1:

Adds the word "exclusively" and deletes "[and functionally independent to one another]".

It is the position of the Examiner that the addition of the word "exclusively" does not affect the anticipation of the applied prior art of Ella. Ella shows the ladder filter (e.g. Figs. 10a, b) including notches (shown as N1 and N2 – Fig. 10b) where the BAW (3) creates the upper frequency notch (N1) and the shunt BAW (2) creates the lower frequency notch (N2), hence the notch filters exclusively producing notches. The SCF (4) alone does not appear to have a notch and the SCF in conjunction with the BAW notch filters is illustrated in Fig. 10c.

Claim 8:

Adds "opposite to the carrier layer".

It is the position of the Examiner that the addition "opposite to the carrier layer" does not affect the anticipation of the applied prior art of Ella.

Ella shows the substrate (36 – Fig. 2) is fastened on the entire assembly (the entire assembly best illustrated by Figs. 14a and 14b in view of the individual element

construction shown in Fig. 2) opposite to the carrier layer (39 – Fig. 2), and the carrier layer is removed (39 disclosed as the sacrificial layer and opposite the substrate 36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elia ('756) as applied to claim 1 above, and further in view of Ella (U.S. Patent No. 5,714,917) for reasons of record contained in the office action dated September 16, 2002 (paper no. 11).

Claim 14 has not been amended and remains rejected for reasons of rejection of claim 8 above.

Response to Arguments

Applicant's arguments filed December 20, 2002 by amendment (amendment C – paper no. 12) have been fully considered but they are not persuasive.

amended to include the word "exclusively".

It is the position of the Examiner that the addition of the word "exclusively" does not affect the anticipation of the applied prior art of Ella. It is argued that the present invention comprises a bandpass filter and notch filter to which "*the notch filter is used exclusively for the purpose of producing a notch at one or both edges of the passband*

generated by the bandpass filter." The prior art of Ella is discussed in which the BAW ladder filter "generate the notches above and below the passband, also function as a *bandpass filter for generating a frequency response at the required center frequency.*"

The current invention shows a notch filter represented by a parallel C and L, comprising a parallel resonance thus forming a notch filter illustrated in Figs. 2 and 3, albeit that the notch (C + L) is shown in series with B, identified in the specification as a "bandpass filter" (page 5). The current invention further shows a cascaded or "ladder" arrangement of resonators (Fig. 5) in which Fig. 5 shows the well-known circuit representation of series and shunt BAW resonators, the shunt BAW resonators all connected to ground. The prior art of Ella also shows the "ladder" configuration with shunt resonators all connected to ground (Figs. 10d, 11a, 11c, 13), albeit with SCR's (stacked crystal filters) which are merely dual or stacked BAW's, thus the prior art of Ella structurally is the same as the current invention (regardless of the mere difference of any multiple series BAW's and/or SCR's, shown by Ella).

It is inferred that the current invention differs from the prior art of Ella because the current invention exclusively creates notches, "However, *unlike the present invention*

in Ella, which generate the notches above and below the passband, also function as a bandpass filter". Examiner maintains that the functionality of the filters of Ella anticipate the "ladder" BAW network of Fig. 5. Ella shows the ladder filter (e.g. Figs. 10a, b) including notches (shown as N1 and N2 – Fig. 10b) where the series BAW (3) creates the upper frequency notch (N1) and the shunt BAW (2) creates the lower frequency

notch (N2), hence the notch filters exclusively producing notches. The SCF (4) alone does not appear to have a notch and the SCF in conjunction with the BAW notch filters is illustrated in Fig. 10c, therefore it is the position of the Examiner that the prior art of Ella meets the limitations of the amended claims therefore the rejections under 35 U.S.C. 102 are maintained.

With respect to claim 8, claim 8 has been amended to include "opposite to the carrier layer". It is the position of the Examiner that the addition "opposite to the carrier layer" does not affect the anticipation of the applied prior art of Eila.

Ellia shows the substrate (36 – Fig. 2) is fastened on the entire assembly (the entire assembly best illustrated by Figs. 14a and 14b in view of the individual element construction shown in Fig. 2) opposite to the carrier layer (39 – Fig. 2), and the carrier layer is removed (39 disclosed as the sacrificial layer and opposite the substrate 36).

It is argued that Ella shows the sacrificial layer “*between the substrate and the membrane*”. While this is clearly shown in Fig. 2 by Ella which comprises elements membrane 28, substrate 36, sacrificial layer 39, the limitation of claim 8 merely recites “*opposite to the carrier layer*”, thus the spatial relationship of the membrane of the

commensurate to what is being claimed, thus it is the position of the Examiner that the prior art of Ella meets the limitations of the amended claims therefore the rejections under 35 U.S.C. 102 are maintained.

Conclusion

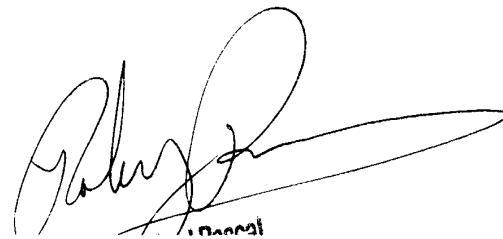
The rejections of claims 15 and 16 under 35 U.S.C 112 2nd paragraph, contained in the previous office action dated September 16, 2002 (paper no. 11), are withdrawn in view of the cancellation of claims 15 and 16 by the Applicant without traverse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O Takaoka whose telephone number is (703) 305-6242. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dot
February 10, 2003



Supervisory
Technologist 804